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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV323525251US, in an envelope addressed to: MS Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: 11/15/04 Signature: Joanne Ryan  
(Joanne Ryan)

Docket No.: BBNT-P01-002  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Remington et al.

Application No.: 10/060698

Confirmation No.: 7041

Filed: January 30, 2002

Art Unit: 2834

For: COMPLIANT STATOR

Examiner: I. A. Mohandesi

**REQUEST FOR REINSTATEMENT OF APPEAL**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

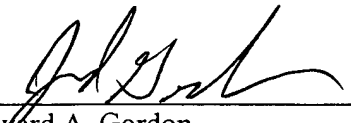
Dear Sir:

In response to the non-final Office Action, dated June 17, 2004, that reopened prosecution in this application, Appellants respectfully request reinstatement of the appeal. A Supplemental Appeal Brief accompanies this request.

Applicant believes no fee is due with this response other than as reflected on the enclosed Fee Transmittal. However, if a fee is due, please charge our Deposit Account No. 18-1945, under Order No. BBNT-P01-002 from which the undersigned is authorized to draw.

Dated: November 15, 2004

Respectfully submitted,

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**SUPPLEMENTAL APPEAL BRIEF**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on February 27, 2004, and is in furtherance of said Notice of Appeal.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

- |            |  |
|------------|--|
| I.         | Real Party In Interest                                   |
| II         | Related Appeals, Interferences, and Judicial Proceedings |
| III.       | Status of Claims   |
| IV.        | Status of Amendments                                     |
| V.         | Summary of Claimed Subject Matter                        |
| VI.        | Grounds of Rejection to be Reviewed on Appeal            |
| VII.       | Arguments  |
| VIII.      | Conclusion   |
| Appendix A | Claims   |

**I. REAL PARTY IN INTEREST**

The real party in interest for this appeal is BBNT Solutions LLC

## II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

## III. STATUS OF CLAIMS

Claims 1-7 and 10 are pending in this application.

Claims 1-7, 9, and 10 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Spreen (U.S. Patent No. 1,688,891) in view of Vorotyntseva et al. (U.S. Patent No. 4,363,987).

Claim 9 was canceled via the Amendment filed August 4, 2003. Therefore, the rejection of that claim is moot.

Claims 1-7 and 10 are the subject of the present appeal. These claims are reproduced in the Claim Appendix of this Supplemental Appeal Brief

## IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the non-final Office Action, dated June 17, 2004.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

In the paragraphs that follow, each of the independent claims that is involved in this appeal will be recited followed in parenthesis by examples of where support can be found in the specification and drawings.

Claim 1 recites a motor (100, 200) comprising: a rotor (110, 210; page 4, lines 1-2 and 15-17); a stator (120, 220; page 4, lines 2-5 and 15-17) located external to the rotor and including main (121; page 4, lines 2-5) and auxiliary windings (122; page 4, lines 2-5, and page 5, lines 16-19); an outer motor case (230; page 4, lines 15-17); and a plurality of compliant mounts positioned between the stator and outer motor case and configured to enhance forces

applied to a foundation due to excitation of the auxiliary windings (240; page 4, lines 15-17, page 5, lines 1-10, and page 6, lines 1-5).

Claim 6 recites an electromechanical machine (300) comprising: a rotor (310; page 6, lines 11-12); a stator located external to the rotor and including main and auxiliary windings (320; page 6, lines 12-13); linear bearings configured to constrain a motion of the stator to an axial direction (320; page 6, lines 13-17); and a plurality of compliant mounts connected to the stator and configured to enhance axial forces applied to a foundation due to excitation of the auxiliary windings (330; page 6, line 18, to page 7, line 9).

Claim 10 recites a method for implementing a motor including a rotor (210) and a stator (220), comprising: providing an outer motor case (230), the outer case reacting torque applied by the stator to the rotor (page 4, lines 19-21); and providing a plurality of compliant mounts (240) between the stator (220) and the outer motor case (230), the compliant mounts being configured to react torque (page 5, lines 1-10).

## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1-7 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Spreen (U.S. Patent No. 1,688,891) in view of Vorotyntseva et al. (U.S. Patent No. 4,363,987).

## VII. ARGUMENT

A. **Rejection under 35 U.S.C. § 103(a) based on Spreen (U.S. Patent No. 1,688,891) in view of Vorotyntseva et al. (U.S. Patent No. 4,363,987).**

1. Claims 1, 2, 5, and 10.

The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention always rests upon the Examiner. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In rejecting a claim under 35 U.S.C. § 103, the Examiner must provide a factual basis to support the conclusion of obviousness. In re Warner, 379 F.2d 1011, 154 USPQ 173

(CCPA 1967). Based upon the objective evidence of record, the Examiner is required to make the factual inquiries mandated by Graham v. John Deere Co., 86 S.Ct. 684, 383 U.S. 1, 148 USPQ 459 (1966). The Examiner is also required to explain how and why one having ordinary skill in the art would have been realistically motivated to modify an applied reference and/or combine applied references to arrive at the claimed invention. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

In establishing the requisite motivation, it has been consistently held that the requisite motivation to support the conclusion of obviousness is not an abstract concept, but must stem from the prior art as a whole to impel one having ordinary skill in the art to modify a reference or to combine references with a reasonable expectation of successfully achieving some particular realistic objective. See, for example, Interconnect Planning Corp. v. Feil, 227 USPQ 543 (Fed. Cir. 1985). Consistent legal precedent admonishes against the indiscriminate combination of prior art references. Carella v. Starlight Archery, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985).

With these principles in mind, Appellants' claim 1 recites an electromechanical machine that includes a rotor, a stator, an outer motor case, and a plurality of compliant mounts. The stator is located external to the rotor and includes main and auxiliary windings. The plurality of compliant mounts is positioned between the stator and outer motor case and is configured to enhance forces applied to a foundation due to excitation of the auxiliary windings. Spreen and Vorotyntsevs et al., whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, Spreen does not disclose a stator that includes main and auxiliary windings. The Examiner appears to rely on element 15 in Fig. 1 of Spreen for allegedly disclosing the main and auxiliary windings (Office Action, pg. 2). Appellants submit that this element in Spreen does not disclose or suggest main and auxiliary windings.

Element 15 in Fig. 1 of Spreen corresponds to stator windings (col. 1, line 22). Contrary to the Examiner's allegation, Spreen does not disclose or suggest that stator windings 15 include main and auxiliary windings, as required by claim 1.

The Examiner also seems to admit that Spreen does not disclose auxiliary windings and relies on excitation windings 14 in Fig. 2 of Vorotyntsevs et al. for allegedly corresponding to this feature (Office Action, pg. 2). While not acquiescing in the Examiner's allegation, Appellants submit that one skilled in the art would not seek to modify the Spreen system to include Vorotyntsevs et al.'s excitation windings 14, absent impermissible hindsight.

With respect to motivation, the Examiner alleges "it would have been obvious ... to combine **Spreen '891** motor with excitation winding taught by **Vorotyntsevs '987**" for "compensating a reactive force arising during operation of the machine" (Office Action, pp. 2-3). Appellants disagree.

Spreen is directed to an electric motor 11 that includes a rotor 12 rotatably mounted in end plates 13, a stator 14 carrying stator windings 15, a frame 16, and an annular soft rubber member 17 disposed between the outer surfaces of stator 14 and the inner surface of frame 16 (Fig. 1; col. 1, lines 19-36). Spreen discloses that annular soft rubber member 17 acts to insulate stator 14 from motor frame 16 and absorb the vibration of the motor (col. 1, lines 37-45). Therefore, there is no need to incorporate Vorotyntsevs et al.'s excitation windings 14 into Spreen's motor to compensate a reactive force arising during operation of Spreen's motor, since

Spreen's annular soft rubber member 17 already performs this function. Spreen does not disclose or suggest a desire to include auxiliary windings (or excitement windings). Appellants submit that one skilled in the art would not seek to modify Spreen's motor to include Vorotyntsevs et al.'s excitation windings 14, absent impermissible hindsight.

Spreen and Vorotyntsevs et al. do not further disclose a plurality of compliant mounts positioned between the stator and the outer motor case and configured to enhance forces applied to a foundation due to excitation of the auxiliary windings, as also required by claim 1. The Examiner relies on element 17 (Fig. 1) and col. 1, line 23, of Spreen for allegedly disclosing this feature (Office Action, pg. 2). Appellants submit that these sections of Spreen do not disclose or suggest the recited feature.

Spreen's element 17 corresponds to a soft rubber member (col. 1, line 23). Spreen specifically discloses that rubber member 17 is annular (i.e., in the shape of a ring). Fig. 2 of Spreen depicts annular soft rubber member 17 as a single piece of rubber. Appellants' claim 1, however, recites a plurality of compliant mounts. Spreen's single annular soft rubber member 17 cannot reasonably be alleged to correspond to a plurality of compliant mounts.

Moreover, Spreen does not disclose or suggest that the single, annular soft rubber member 17 is configured to enhance forces applied to a foundation due to excitation of the auxiliary windings, as required by claim 1. With respect to this feature, the Examiner alleges that "a plurality of isolators (17, rubber column, line 23, Fig. 1) positioned between the stator and outer motor case (Fig. 1) inherently with bearing, configured to enhance forces applied to a foundation due to windings" (Office Action, pg. 2). The Examiner has not, however, pointed to any section of Spreen to support the allegation that Spreen's soft annular member is configured

to enhance forces applied to a foundation due to excitation of the auxiliary windings.

Accordingly, a *prima facie* case of obviousness has not been established with respect to claim 1.

Nonetheless, Spreen does not disclose or suggest that annular soft rubber member 17 enhances forces applied to a foundation due to excitation of the auxiliary windings. Instead, Spreen specifically discloses that annular soft rubber member 17 absorbs vibration of the motor (col. 1, lines 37-45). One skilled in the art will appreciate that absorbing vibration of a motor is different than enhancing forces applied to a foundation due to excitation of the auxiliary windings.

Moreover, since Spreen does not disclose or suggest that stator windings 15 include auxiliary windings, Spreen cannot disclose or suggest a plurality of compliant mounts positioned between the stator and outer motor case and configured to enhance forces applied to a foundation due to excitation of the auxiliary windings, as required by claim 1.

For at least the foregoing reasons, Appellants respectfully request that the rejection of claim 1 under 35 U.S.C. § 103(a) as unpatentable over Spreen and Vorotyntsevs et al. be REVERSED.

2. Claim 3.

Dependent claim 3 recites that the auxiliary windings generate forces, and the outer motor case attaches to the foundation and reacts the forces generated by the auxiliary windings. Claim 3 depends from claim 1 and, therefore, is patentable over Spreen and Vorotyntsevs et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1. Moreover, this claim is patentable over Spreen and Vorotyntsevs et al. for reasons of its own.

The Examiner relies on Spreen for allegedly disclosing the features of claim 3 and alleges "in any electric motor the magnetic field of the stator and rotor inherently generate a



rotating motion resulting torque which applies to the foundation to hold the housing of the motor" (Office Action, pg. 3). This generalization by the Examiner in no way addresses the above features of claim 3.

Since Spreen does not disclose or suggest auxiliary windings, Spreen cannot disclose the features of claim 3. The Examiner did not point to any section of Spreen that discloses that the outer motor case, which the Examiner alleges corresponds to frame 16 (see Office Action, pg. 2), attaches to a foundation. Accordingly, the Examiner has not established a *prima facie* basis for denying patentability with respect to claim 3. The disclosure of Vorotyntsevsa et al. does not remedy the above deficiencies in the disclosure of Spreen.

For at least the foregoing reasons, Appellants respectfully request that the rejection of claim 3 under 35 U.S.C. § 103(a) as unpatentable over Spreen and Vorotyntsevsa et al. be REVERSED.

3. Claim 4.

Dependent claim 4 recites that the compliant mounts are symmetrically positioned about an axis of the motor. Claim 4 depends from claim 1 and, therefore, is patentable over Spreen and Vorotyntsevsa et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1. Moreover, this claim is patentable over Spreen and Vorotyntsevsa et al. for reasons of its own.

The Examiner relies on element 17 in Fig. 12 of Spreen for allegedly disclosing the feature of claim 4 (Office Action, pg. 3). Since Spreen does not include a Fig. 12, Appellants assume that the Examiner intended to point to Fig. 2 of Spreen that depicts annular soft rubber member 17 positioned between stator 14 and frame 16. Appellants submit that Fig. 2 of Spreen does not support the Examiner's allegation.

Claim 1, from which claim 4 depends, recites a plurality of compliant mounts. Claim 4 recites that the compliant mounts are symmetrically positioned about an axis of the motor. Spreen specifically discloses that rubber member 17 is annular (i.e., in the shape of a ring). Fig. 2 of Spreen depicts annular soft rubber member 17 as a single piece of rubber. Appellants' claims 1 and 4, however, recite a plurality of compliant mounts. Spreen's single annular soft rubber member 17 cannot reasonably be alleged to correspond to a plurality of symmetrically positioned compliant mounts. The disclosure of Vorotyntsevs et al. does not remedy the above deficiencies in the disclosure of Spreen.

For at least the foregoing reasons, Appellants respectfully request that the rejection of claim 4 under 35 U.S.C. § 103(a) as unpatentable over Spreen and Vorotyntsevs et al. be REVERSED.

4. Claim 6 and 7.

Independent claim 6 recites an electromechanical machine. The electromechanical machine includes a rotor; a stator located external to the rotor and including main and auxiliary windings; linear bearings configured to constrain a motion of the stator to an axial direction; and a plurality of compliant mounts connected to the stator and configured to enhance axial forces applied to a foundation due to excitation of the auxiliary windings. Spreen and Vorotyntsevs et al., whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, Spreen and Vorotyntsevs et al. do not disclose or suggest linear bearings configured to constrain a motion of the stator to an axial direction. The Examiner alleges that Spreen's outer motor case, which the Examiner alleges corresponds to frame 16, "inherently" includes bearings (Office Action, pg. 2). Appellants disagree.

M.P.E.P. § 2112 requires the Examiner, when relying on the theory of inherency, to provide "a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The Examiner has not provided the necessary showing articulated in M.P.E.P. § 2112 to support the inherency assertion. Nothing in the disclosure of Spreen supports the Examiner's allegation that frame 16 includes linear bearings configured to constrain a motion of the stator to an axial direction, as required by claim 6. Accordingly, a *prima facie* case of obviousness has not been established with respect to claim 6.

Claim 6 further recites a plurality of compliant mounts connected to the stator and configured to enhance axial forces applied to a foundation due to excitation of the auxiliary windings. The Examiner relies on element 17 of Spreen as allegedly corresponding to this feature of claim 6 (Office Action, pg. 2). Appellants submit that element 17 of Spreen does not correspond to the recited plurality of compliant mounts.

As set forth above, element 17 of Spreen corresponds to a soft rubber member (col. 1, line 17). Spreen specifically discloses that rubber member 17 is annular (i.e., in the shape of a ring). Fig. 2 of Spreen depicts annular soft rubber member 17 as a single piece of rubber. Appellants' claim 6, however, recites a plurality of compliant mounts. Spreen's single annular soft rubber member 17 cannot be reasonably alleged to be a plurality of compliant mounts.

For at least the foregoing reasons, Appellants respectfully request that the rejection of claim 6 under 35 U.S.C. § 103(a) as unpatentable over Spreen and Vorotyntsevs et al. be REVERSED.

Application No.: 10/060698  
Express Mail: EV323525251US

Docket No.: BBNT-P01-002

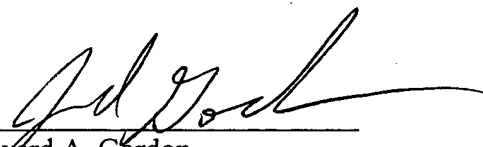
VIII. CONCLUSION

In view of the foregoing arguments, Appellants respectfully solicit the Honorable Board to reverse the Examiner's rejections of claims 1-7 and 10 under 35 U.S.C. § 103.

Applicant believes no fee is due with this response other than as reflected on the enclosed Transmittal. However, if a fee is due, please charge our Deposit Account No. 18-1945, under Order No. BBNT-P01-002 from which the undersigned is authorized to draw.

Dated: November 15, 2004

Respectfully submitted,

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**APPENDIX A**

1. A motor comprising:  
a rotor;  
a stator located external to the rotor and including main and auxiliary windings;  
an outer motor case; and  
a plurality of compliant mounts positioned between the stator and outer motor case and configured to enhance forces applied to a foundation due to excitation of the auxiliary windings.
2. The motor of claim 1 wherein the compliant mounts are of an elastomeric material.
3. The motor of claim 1 wherein the auxiliary windings generate forces, and wherein the outer motor case attaches to a foundation and reacts the forces generated by the auxiliary windings.
4. The motor of claim 1 wherein the compliant mounts are symmetrically positioned about an axis of the motor.
5. The motor of claim 1 wherein the compliant mounts are positioned to be in shear for radial and axial deflections and in compression for rotation about an axis of the motor.
6. An electromechanical machine comprising:  
a rotor;

a stator located external to the rotor and including main and auxiliary windings;  
linear bearings configured to constrain a motion of the stator to an axial direction;  
and  
a plurality of compliant mounts connected to the stator and configured to enhance axial forces applied to a foundation due to excitation of the auxiliary windings.

7. The electromechanical machine of claim 6 wherein the compliant mounts are formed of an elastomeric material.

10. A method for implementing a motor including a rotor and a stator, comprising:  
providing an outer motor case, the outer case reacting torque applied by the stator to the rotor; and  
providing a plurality of compliant mounts between the stator and the outer motor case, the compliant mounts being configured to react torque.